

WHAT IS CLAIMED IS:

1. An image processing apparatus for reproducing already stored moving image data while storing moving image data currently input, said image processing apparatus comprising:

a) moving image data storing means for storing
input moving image data;

b) scene feature information extracting means for extracting scene feature information of each of a plurality of scenes constituting the moving image data stored in said moving image data storing means;

c) digest forming means for forming digest data for reproducing a digest of the moving image data, in accordance with the scene feature information extracted by said scene feature information extracting means; and

d) reproducing means for reproducing a digest of the moving image data stored in said moving image data storing means in accordance with the digest data formed by said digest data forming means.

2. An apparatus according to claim 1, wherein
said reproducing means reproduces, in a normal
reproduction mode, current moving image data stored in
said moving image data storing means, after
completion of the direct ~~image~~ processing.

3. An apparatus according to claim 1, wherein

reproduction of the digest is performed in response to an external instruction.

4. An apparatus according to claim 3, wherein
5 said digest forming means forms digest data in accordance with the scene feature information during a period from a digest reproduction start position to a digest reproduction designation position, and forms digest data at a predetermined interval during a period
10 from the digest reproduction designation position to a digest reproduction end position.

5. An apparatus according to claim 3, wherein
15 said digest forming means modifies the digest data during a period from a digest reproduction designation position to a digest reproduction end position represented by the external instruction, each time said scene feature information extracting means extracts the scene feature information.

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6. An apparatus according to claim 3, wherein
said digest forming means forms digest data always at a predetermined interval during a period from a digest reproduction start position to a digest reproduction end position represented by the external instruction.

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7. An apparatus according to claim 3, wherein

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said digest forming means forms digest data including a scene having a predetermined length starting from a digest reproduction start position represented by the external instruction.

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8. An apparatus according to claim 3, wherein said digest forming means forms digest data in accordance with a length of a digest represented by the external instruction.

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9. An apparatus according to claim 3, wherein said digest forming means sets a length of the digest to have a predetermined ratio to a length from a digest reproduction start position to a digest reproduction designation position represented by the external instruction.

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10. An apparatus according to claim 1, wherein the scene feature information includes at least one of information representative of a degree of scene change and information representative of a degree of motion of a subject in a scene.

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11. An apparatus according to claim 1, wherein the input moving image data contains beforehand the scene feature information.

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12. An apparatus according to claim 1, wherein
said reproducing means selectively can perform a normal
reproduction mode and a digest reproduction mode.

5 13. An image processing method of reproducing
already stored moving image data while storing moving
image data currently input, said image processing
method comprising:

- 10 a) a storing step of storing input moving image
data in moving image data storing means;
- 15 b) a scene feature information extracting step of
extracting scene feature information of each of a
plurality of scenes constituting the moving image data
stored in said moving image data storing means;
- 20 c) a digest forming step of forming digest data
for reproducing a digest of the moving image data, in
accordance with the scene feature information extracted
in said scene feature information extracting step; and
- 25 d) a reproducing step of reproducing a digest of
the moving image data stored in said moving image data
storing means in accordance with the digest data formed
in said digest data forming step.

14. A method according to claim 13, wherein said
25 reproducing step includes a step of reproducing, in a
normal reproduction mode, current moving image data
stored in said moving image data storing means, after

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reproduction of the digest is completed.

15. A method according to claim 13, wherein
reproduction of the digest is performed in response to
5 an external instruction.

16. A method according to claim 15, wherein said
digest forming step includes a step of forming digest
data in accordance with the scene feature information
10 during a period from a digest reproduction start
position to a digest reproduction designation position,
and forming digest data at a predetermined interval
during a period from the digest reproduction
designation position to a digest reproduction end
15 position.

17. A method according to claim 15, wherein said
digest forming step includes a step of modifying the
digest data during a period from a digest reproduction
20 designation position to a digest reproduction end
position represented by the external instruction, each
time said scene feature information extracting step
extracts the scene feature information.

25 18. A method according to claim 15, wherein said
digest forming step includes a step of forming digest
data always at a predetermined interval during a period

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from a digest reproduction start position to a digest reproduction end position represented by the external instruction.

5 19. A method according to claim 15, wherein said digest forming step includes a step of forming digest data including a scene having a predetermined length starting from a digest reproduction start position represented by the external instruction.

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20. A method according to claim 15, wherein said digest forming step includes a step of forming digest data in accordance with a length of a digest represented by the external instruction.

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21. A method according to claim 15, wherein said digest forming step includes a step of setting a length of the digest to have a predetermined ratio to a length from a digest reproduction start position to a digest reproduction designation position represented by the external instruction.

22. A method according to claim 13, wherein the
scene feature information includes at least one of
25 information representative of a degree of scene change
and information representative of a degree of motion of
a subject in a scene.

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23. A method according to claim 13, wherein the input moving image data contains beforehand the scene feature information.

5 24. A method according to claim 13, wherein said reproducing step includes of a step of selectively performing a normal reproduction mode and a digest reproduction mode.

10 25. An image processing program executable by a computer to reproduce already stored moving image data while storing moving image data currently input, said image processing program comprising:

- a) codes for a storing step of storing input moving image data in moving image data storing means;
- b) codes for a scene feature information extracting step of extracting scene feature information of each of a plurality of scenes constituting the moving image data stored in said moving image data storing means;
- c) codes for a digest forming step of forming digest data for reproducing a digest of the moving image data, in accordance with the scene feature information extracted in the scene feature information extracting step; and
- d) codes for a reproducing step of reproducing a digest of the moving image data stored in said moving

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image data storing means in accordance with the digest data formed in the digest data forming step.

26. A computer readable storage medium storing an
5 image processing program for reproducing already stored
moving image data while storing moving image data
currently input, said image processing program
comprising:

- a) codes for a storing step of storing input
10 moving image data in moving image data storing means;
- b) codes for a scene feature information
extracting step of extracting scene feature information
of each of a plurality of scenes constituting the
moving image data stored in said moving image data
15 storing means;
- c) codes for a digest forming step of forming
digest data for reproducing a digest of the moving
image data, in accordance with the scene feature
information extracted in the scene feature information
20 extracting step; and
- d) codes for a reproducing step of reproducing a
digest of the moving image data stored in said moving
image data storing means in accordance with the digest
data formed in the digest data forming step.